EAST AFRICAN COMMUNITY

EDICT OF GOVERNMENT

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EAS 755 (2011) (English): Cowpeas – Specification



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EAST AFRICAN STANDARD

Cowpeas — Specification

EAST AFRICAN COMMUNITY

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Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that “Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose”.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

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East African Community

P O Box 1096

Arusha

Tanzania

Tel: 255 27 2504253/8

Fax: 255-27-2504481/2504255

E-Mail: eac@eachq.org

Web: www.each.int

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Introduction

This standard has been developed to take into account:

— the needs of the market for the product;

— the need to facilitate fair domestic, regional and international trade and prevent technical barriers to trade by establishing a common trading language for buyers and sellers.

— the structure of the CODEX, UNECE, USA, ISO and other internationally significant standards;

— the needs of the producers in gaining knowledge of market standards, conformity assessment, commercial cultivars and crop production process;

— the need to transport the product in a manner that ensures keeping of quality until it reaches the consumer;

— the need for the plant protection authority to certify, through a simplified form, that the product is fit for cross-border and international trade without carrying plant disease vectors;

— the need to promote good agricultural practices that will enhance wider market access, involvement of small-scale traders and hence making farming a viable means of wealth creation; and

— the need to ensure a reliable production base of consistent and safe crops that meet customer requirements.

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Cowpeas — Specification

1 Scope

This East African Standard specifies the requirements and methods of sampling and test for dry cowpeas of the varieties (cultivars) grown from *Vigna unguiculata* Linn.Sync. *Vigna sinensis* (L.) Hassk. intended for human consumption.

2 Normative references

The following normative documents contain provisions which, through reference in this text constitute provisions of this East African Standard

EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

EAS 38, *Labelling of pre-packaged foods — Specification*

EAS 79, *Cereals and pulses as grain — Methods of sampling*

EAS 217, *Methods for the microbiological examination of foods*

ISO 520, *Cereals and pulses — Determination of the mass of 1000 grains*

ISO 605*, Pulses — Determination of impurities, size, foreign odours, insects, and species and variety — Test methods*

ISO 2164, *Pulses — Determination of glycosidic hydrocyanic acid*

ISO 2171, *Cereals, pulses and by-products — Determination of ash yield by incineration*

ISO 4112, *Cereals and pulses — Guidance on measurement of the temperature of grain stored in bulk*

ISO 4174, *Cereals, oilseeds and pulses — Measurement of unit pressure loss in one-dimensional air flow through bulk grain*

ISO 5223, *Test sieves for cereals*

ISO 5526, *Cereals, pulses and other food grains — Nomenclature*

ISO 5527, *Cereals — Vocabulary*

ISO 6322-1, *Storage of cereals and pulses — Part 1: General recommendations for the keeping of cereals*

ISO 6322-2, *Storage of cereals and pulses — Part 2: Practical recommendations*

ISO 6322-3, *Storage of cereals and pulses — Part 3: Control of attack by pests*

ISO 6639-1, *Cereals and pulses — Determination of hidden insect infestation — Part 1: General principles*

ISO 6639-2, *Cereals and pulses — Determination of hidden insect infestation — Part 2: Sampling*

ISO 6639-3, *Cereals and pulses — Determination of hidden insect infestation — Part 3: Reference method*

ISO 6639-4, *Cereals and pulses — Determination of hidden insect infestation — Part 4: Rapid methods*

ISO 13690, *Cereals, pulses and milled products — Sampling of static batches*

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ISO 16002:2004, *Stored cereal grains and pulses — Guidance on the detection of infestation by live invertebrates by trapping*

ISO 16050, *Foodstuffs — Determination of aflatoxin B_1, and the total content of aflatoxin B_1, B_2, G_1 and G_2 in cereals, nuts and derived products — High performance liquid chromatographic method*

ISO/TS 16634-2, *Food products — Determination of the total nitrogen content by combustion according to the Dumas principle and calculation of the crude protein content — Part 2: Cereals, pulses and milled cereal products*

ISO 20483, *Cereals and pulses — Determination of the nitrogen content and calculation of the crude protein content — Kjeldahl method*

ISO 24557, *Pulses — Determination of moisture content — Air-oven method*

CODEX Stan 193, Codex general Standards for contaminants and toxins in Food and Feed

3 Terms and definitions

For the purpose of this standard the following definitions and grading factors shall apply:

3.1
cowpeas
dry mature seeds of *Vigna unguiculata* L.

3.2
broken cowpeas
pieces of cowpeas that are less than three-quarters the size of a whole seed

3.3
damaged
whole or broken cowpeas that are sprouted, frost damaged, heated, damaged by insects, distinctly deteriorated or discoloured by weather or by disease, or that are otherwise

3.4
shrivelled cowpeas
cowpeas which are under-developed and wrinkled over their entire surface excluding wrinkled chickpeas

3.5
split
broken pieces of cowpeas that are less than three-quarters of the whole seed, and cotyledons that are loosely held together by the seed coat

3.6
foreign matter
any extraneous matter than cowpeas or other food grains comprising of

(a) "inorganic matter" includes metallic pieces, shale, glass, dust, sand, gravel, stones, dirt, pebbles, lumps or earth, clay, mud and animal filth etc;
(b) "organic matter" consisting of detached seed coats, straws, weeds and other inedible grains etc.

3.7
poisonous, toxic and/or harmful seeds
any seed which if present in quantities above permissible limit may have damaging or dangerous effect on health, organoleptic properties or technological performance such as Jimson weed — datura (*D. fastuosa* Linn and *D. stramonium* Linn.) corn cokle (*Agrostemma githago* L., *Machai Lallium remulenum* Linn.) Akra (Vicia species), *Argemone mexicana*, Khesari and other seeds that are commonly recognized as harmful to health

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4 Quality Requirements

4.1 General requirements

Cowpeas shall meet the following general requirements/limits as determined using the relevant standards listed in Clause 2. Cowpeas;

a) shall be the dried mature grains of *Vigna unguiculata* Linn;

b) shall be well-filled, clean, wholesome, uniform in size, and shape;

c) shall be free from substances which render them unfit for human or animal consumption or processing into or utilisation thereof as food or feed;

d) shall be free from abnormal flavours, musty, sour or other undesirable odour, obnoxious smell and discolouration;

e) shall be free from micro-organisms and substances originating from micro-organisms, fungi or other poisonous or deleterious substances in amounts that may constitute a hazard to human health.

4.2 Specific requirements

4.2.1 Grading

Cowpeas shall be graded into three grades on the basis of the tolerable limits established in Table 1 which shall be additional to the general requirements set out in this standard.

4.2.2 Ungraded cowpeas

Shall be cowpeas which do not fall within the requirements of Grades 1, 2, and 3 of this standard but are not rejected cowpeas.

Note: For Tanzania and Burundi this requirement shall not apply.

4.2.3 Reject grade cowpeas

Reject cowpeas shall be peas which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odour; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality. The characteristics are not within the parameters specified in Table 1. They cannot satisfy the conditions of under grade cowpeas and shall be graded as reject cowpeas and shall be regarded as unfit for human or animal consumption.

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Table 1 — Specific requirements

Characteristics	Maximum limits			Method of test
	Grade 1	Grade 2	Grade 3	
Foreign matter, % m/m	0.2	0.6	1.0	ISO 605
Inorganic matter, % m/m	0.1	0.5	0.75	
Broken/split grains, % m/m	1	2	3	
Pest damaged grains, % m/m	2	3	6	
Rotten & Diseased grains, % m/m	0.5	0.5	1	
Discoloured grains, % m/m	1	1	3	
Immature/Shrivelled grains, % m/m	1	2	3	
Filth, % m/m	0.1	0.1	0.1	
Total Defective Grains, % m/m	2	4	5	
Moisture, % m/m	13.0	13.0	13.0	ISO 24557
Total Aflatoxin (AFB1+AFB2+AFG1 +AFG2)), ppb	10			ISO 16050
Aflatoxin B1 only, ppb	5			
Fumonisin ppm	2			

5 Contaminants

5.1 Heavy metals

Cowpeas shall comply with those maximum limits for heavy metals established by the Codex Alimentarius Commission for this commodity.

5.2 Pesticide residues

Cowpeas shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity

Note: where the use of certain pesticides is prohibited by some Partner States, then it shall be notified to all Partner States accordingly.

5.3 Mycotoxin limits

Cowpeas shall comply with those maximum mycotoxin limits established by the Codex Alimentarius Commission for this commodity. In particular, total aflatoxin levels in cowpeas for human consumption shall not exceed 10 µg/kg (ppb) with B_1 not exceeding 5 µg/kg (ppb) when tested according to ISO 16050.

6 Hygiene

6.1 Cowpeas shall be produced, prepared and handled in accordance with the provisions of appropriate sections of EAS 39

6.2 When tested by appropriate standards of sampling and examination listed in Clause 2, the products:

— shall be free from microorganisms in amounts which may represent a hazard to health and shall not exceed the limits stipulated in Table 2;

— shall be free from parasites which may represent a hazard to health; and

— shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

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Table 2 — Microbiological limits

	Type of micro-organism	Limits	Test method
i)	Yeasts and moulds, max. per g	10^4	EAS 217
ii)	*S.aureus* per 25 g	Not detectable	
iii)	*E. Coli*, max. per g	Not detectable	
iv)	*Salmonella,* max. per 25 g	Not detectable	

7 Packaging

7.1 Cowpeas shall be packed in suitable packages which shall be clean, sound, free from insect, fungal infestation and the packing material shall be of food grade quality.

7.2 Cowpeas shall be packed in containers which will safeguard the hygienic, nutritional, technological and organoleptic qualities of the products.

7.3 The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They shall not impart any toxic substance or undesirable odour or flavour to the product.

7.4 Each package shall contain cowpeas of the same type and of the same grade designation.

7.5 If cowpeas are presented in bags, the bags shall also be free of pests and contaminants.

7.6 Each package shall be securely closed and sealed.

8 Labelling

In addition to the requirements in EAS 38, each package shall be legibly and indelibly marked with the following:

i) product name as “Cowpeas”;

ii) variety;

iii) grade;

iv) name, address and physical location of the producer/ packer/importer;

v) lot/batch/code number;

vi) net weight, in kg;

Note: EAC partner states are signatory to the International Labour Organizations (ILO) for maximum package weight of 50kg where human loading and offloading is involved

vii) the declaration “Food for Human Consumption’’

viii) storage instruction as “Store in a cool dry place away from any contaminants’’;

ix) crop year;

x) packing date;

xi) instructions on disposal of used package;

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xii) country of origin;

xiii) a declaration on whether the cowpeas were genetically modified or not.

9 Sampling methods

Sampling shall be done in accordance with the EAS 79/ISO 13690.

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